

**Technical Support Document**

for

**Approval and Promulgation of Implementation Plans; Arizona-- Maricopa  
Nonattainment Area; PM-10**

**Notice of Final Rulemaking**

September 10, 2001

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## **I. Introduction**

EPA is approving under the Clean Air Act (CAA), as a revision to the Arizona State Implementation Plan (SIP), a general permit rule that provides for the expeditious implementation of best management practices (BMPs) to reduce particulate matter (PM-10) from agricultural sources in the Maricopa County (Phoenix) PM-10 nonattainment area. EPA approving the general permit rule as meeting the “reasonably available control measure” (RACM) requirements of the Act.

This Technical Support Document (TSD) addresses the comments received on the proposal and outlines the information submitted in support of the State’s agricultural general permit. The TSD includes numerous attachments which provide important background information relating to this action.

## **II. History of General Permit, Evaluation of the Agricultural General Permit Rule, and General SIP & CAA Section 110(I) Requirements.**

For the sake of brevity, the history of the general permit rule, EPA’s evaluation of the general permit rule, and the CAA requirements are not repeated in this TSD. Readers interested in this background should review the June 29, 2001 Notice of Proposed Rulemaking (NPR). 66 FR 34598 along with the TSD developed in support of the NPR.

## **III Comments on Proposed Rule and EPA Responses**

EPA received two comment letters on its proposed action. The comments were submitted by Dan Thelander, Chairman, Governor’s Agricultural Best Management Practices Committee and Joy E. Herr-Cardillo, Arizona Center for Law in the Public Interest (ACLPI). Mr. Thelander expressed the BMP Committee’s support for EPA’s proposed approval of the general permit and listed the factors and limitations that the Committee addressed during the development of the general permit. ACLPI, in a July 30, 2001 letter, opposes EPA’s proposed action. EPA responds to ACLPI’s comments below.

**Comment:** ACLPI contends that the general permit rule fails to meet the requirement of CAA section 172(c)(1) that SIPs for nonattainment areas “shall provide for the implementation of all reasonably available control measures.” ACLPI claims that the rule fails to meet this requirement because the BMP Committee identified a variety of clearly available and feasible control measures that are included in the rule as BMPs, but only requires commercial farmers to implement one BMP from each of three categories. As a result, ACLPI claims, the farmer determines which BMP will be implemented without any limiting parameters; and only one BMP is required under each category even where the implementation of more than one would be technologically and economically feasible, a result clearly prohibited by the CAA and EPA policy.

**Response:** As relevant to today's action, Arizona's obligation under the CAA is to provide for the implementation of RACM for the agricultural source category.<sup>1</sup> In order to meet this obligation, the State had to determine what requirement would be not only technologically and economically feasible but also reasonable for controlling this source category in the Phoenix area.

This determination was particularly challenging given the variety, complexity and practical realities of farming in the Phoenix area. In its proposed action on the general permit rule and accompanying technical support document (TSD), EPA explained the multi-year/multi-party process for developing the BMPs ultimately adopted by the BMP Committee. See 66 FR 34598, 34601. As a result of the diversity and constraints of farming operations, the Committee concluded that farmers need flexibility to tailor PM-10 controls to their particular circumstances and that mandating a single, specific control for each individual farm activity would be unreasonable. The Committee did, however, determine that it could subdivide farming operations in Maricopa into three distinct categories for the purposes of developing the appropriate controls. As a result, the Committee created a menu of control options from which the farmer must select a minimum of one for each of the tillage and harvest, cropland and noncropland categories.

EPA concurs with the Committee's assessment and consequently proposed that the requirement to implement at least one control from a list of control options for each of three categories of operations constitutes a reasonable control requirement for the agricultural sector in the Phoenix area.

A requirement that an individual source select one control method from a list, but allowing the source to select which is most appropriate for its situation, is a common and accepted practice for the control of dust. For example, in its PM-10 federal implementation plan (FIP) for Phoenix, EPA promulgated a RACM rule applicable to, among other things, unpaved parking lots, unpaved roads and vacant lots. The rule allows owners and operators to choose one of several listed control methods (pave, apply chemical stabilizers or apply gravel). 40 CFR 52.128(d). In the case of the FIP, those subject to the fugitive dust rule were given a choice of control methods in order to accommodate their financial circumstances. See also South Coast Air Quality Management District (SCAQMD) Rule 403 (providing for alternative compliance mechanisms for the control of fugitive dust from earthmoving, disturbed surface areas, unpaved roads etc.); and SCAQMD Rule 1186 (requiring owners/operators of certain unpaved roads the option to pave, chemically stabilize, or install signage, speed bumps or maintain roadways to inhibit speeds greater than 15 mph). EPA proposed to approve these SCAQMD rules as meeting the RACM and/or BACM requirements of the CAA on

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<sup>1</sup>Nevertheless, as EPA stated in the proposed rulemaking, EPA believes that the general permit rule far exceeds the RACM requirements of the CAA. See 66 FR 34598, 34603.

August 11, 1998 (63 FR 42786) and took final action approving them on December 9, 1998 (63 FR 67784).<sup>2</sup>

Allowing sources the discretion to choose from a range of specified options is particularly important for the agricultural sector because of the variable nature of farming. As a technical matter, neither EPA nor the State is in a position to dictate what precise control method is appropriate for a given farm activity at a given time in a given locale. The decision as to which control method from an array of methods is appropriate is best left to the individual farmer. Moreover, the economic circumstances of farmers vary considerably. As a result, it is imperative that flexibility be built into any PM-10 control measure for the agricultural source category whether that measure is required to meet the RACM or BACM requirements of the Act.

**Comment:** ACLPI states that the CAA expressly provides that all RACM must be implemented by December 10, 1993, citing CAA sections 172(c)(1) and 189(a)(1)(C). Citing *Delaney v. EPA*, 898 F. 2d 687, 691 (9th Cir. 1990), ACLPI contends that since that deadline has passed, RACM must be implemented "as soon as possible." ACLPI states that the general permit rule does not require implementation of a single BMP until December 31, 2001 and that this is clearly too little too late under the CAA.

**Response:** EPA addressed this issue in its proposed approval of the general permit rule by explaining that CAA section 189(a)(1)(C), as interpreted by the Agency under the current circumstances, requires the implementation of RACM as soon as practicable. EPA further explained that the Agency addressed Arizona's requirements regarding the timing of the implementation of the BMPs in its final approval of ARS 49-457. 64 FR 34726 (June 29, 1999). It is that enabling legislation that dictates the December 31, 2001 deadline. The general permit rule simply carries out its mandate by reiterating the statutory deadline. 66 FR 34598, 34600. Therefore, ACLPI, if it wished to contest the issue of whether the December 31, 2001 deadline meets the Delaney test, should have challenged that rule on that basis. Nevertheless, EPA briefly explains the reasoning for its conclusion below.

In 1996, the State of Arizona conducted a field study (known as the microscale study) of PM-10 sources at various monitoring sites in Phoenix. Following the study, the results were modeled and formed the basis for the State's "Plan for Attainment of the 24-hour PM-10 Standard—Maricopa County Nonattainment Area," May 1997 (microscale plan). It was at that time that the State first discovered that agricultural activities did in fact constitute significant sources of PM-10 in Phoenix, and thus required measures to control them. Because it did not provide for the expeditious

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<sup>2</sup>See also EPA's approval of Maricopa County Environmental Services Department (MCESD) Rule 310 as meeting the RACM/BACM requirements (62 FR 41856, August 4, 1997) and EPA's proposal to approve updated Rule 310 and MCESD Rule 310.01 as meeting the same requirements (65 FR 19964, April 13, 2000).

implementation of reasonably and best available control measures for these agricultural sources, EPA disapproved the microscale plan for that purpose. 62 FR 41856 (August 4, 1997).

One year after disapproving the microscale plan, EPA issued a final FIP that addressed, among other things, PM-10 emissions from agricultural sources in Phoenix. In the FIP, EPA promulgated an enforceable commitment, codified at 40 CFR 52.127, to adopt, and begin implementing RACM for agricultural fields and aprons by June 2000. 63 FR 41326, 41350 (August 3, 1998).

In developing the FIP, EPA initially evaluated rules in the South Coast Air Basin, the only existing agricultural control measures for PM-10 in the country. However, agricultural sources, unlike many stationary sources which can have many common design features, whether located in California or New Jersey, vary by factors such as regional climate, soil type, growing season, crop type, water availability, and relation to urban centers. Therefore each PM-10 agricultural strategy is necessarily based on local circumstances. With respect to Phoenix and the South Coast, EPA determined that the two areas differ in a number of key characteristics. Based on this initial screening, EPA decided that it would not be responsible to propose the SCAQMD rules at that time because the Agency could not reasonably conclude that their implementation would in fact result in air quality benefits for the Maricopa nonattainment area.

As a result of this conclusion, EPA initiated a stakeholder process to develop RACM in the form of BMPs for Phoenix that eventually included ADEQ, MCESD, the Natural Resources Conservation Service of the U.S. Department of Agriculture, the Maricopa Association of Governments, the Maricopa Farm Bureau, Arizona Farm Bureau Federation, the University of Arizona and others. Following numerous meetings and discussions, EPA concluded that the most feasible approach for the FIP would be the Agency's commitment to develop and implement the BMPs on an expeditious schedule. For a more detailed discussion of EPA's efforts to develop RACM for agricultural sources in Phoenix, see EPA's FIP proposal at 15920, 15936 (April 1, 1998) and the accompanying technical support document.

As discussed above, on June 29, 1999, EPA withdrew the FIP commitment and approved in its place ARS 49-457 which embodies a commitment to adopt by rule by June 10, 2000 a general permit specifying BMPs. The statute also provides for the initiation of a public education program by June 10, 2000 and sets a final deadline of December 31, 2001 for farmers to comply with the BMPs. In its proposed approval of ARS 49-457, EPA reiterated its reasons for concluding that the implementation schedule was as expeditious as practicable:

In general, EPA believes that because agricultural sources in the United States vary by factors such as regional climate, soil type, growing season, crop type, water availability, and relation to urban centers, each PM-10 agricultural strategy

is uniquely based on local circumstances. Furthermore, EPA determined that the goal of attaining the PM-10 standards in Maricopa County with respect to agricultural sources would be best served by engaging all interested stakeholders in a joint comprehensive process on the appropriate mix of agricultural controls to implement in Maricopa County. EPA stated its belief that this process, despite the additional time needed to work through it, will ultimately result in the best and most cost-effective controls on agricultural sources in the County.

In the FIP notices, EPA also explained its intention to meet its RACM commitment by developing and promulgating BMPs. Given the number of potential BMPs, the variety of crops types, the need for stakeholder input, and the time necessary to develop the BMPs into effective control measures, EPA believes that the adoption and implementation schedule in the FIP is as expeditious as practicable and meets the Act's 189(a)(1)(C) requirement.

63 FR 71815, 71817 (December 30, 1998). EPA concluded that the commitment in ARS 49-457 was superior to that in the FIP because it contains more substance and greater procedural detail, and provides a final implementation deadline. *Id.*<sup>3</sup>

The BMPs have now been adopted and EPA is today approving the general permit rule into the Arizona PM-10 SIP for Phoenix. Thus the December 31, 2001 final implementation deadline will shortly be federally enforceable. Given that 1) agricultural sources had never been regulated anywhere in the country except southern California; 2) agricultural sources vary considerably based on a number of factors; and 3) EPA and ADEQ lacked expertise in farming conditions and practices, EPA believes that under five years from ground zero to final implementation is a considerable accomplishment and meets the Delaney test.

**Comment:** ACLPI, quoting from the "Technical Support Document for Quantification of Agricultural Best Management Practices," Final Draft, URS Corporation and Eastern Research Group, Inc., November 1, 2000, charges that because the general permit rule fails to require any specific control measures, and leaves it entirely to the permittee to determine which BMPs will be implemented, there is no way that the State can know or meaningfully predict what the effect of the rule will be. ACLPI claims that, as a result, any estimated emissions reduction is entirely speculative and, thus, inadequate under the CAA.

**Response:** The PM-10 emission reductions attributable to the BMPs are not at issue in this rulemaking. Here, EPA is merely determining whether the general permit rule

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<sup>3</sup>In its final approval of ARS 49-457, EPA also responded to ACLPI's comment claiming that the implementation schedule is not sufficiently expeditious. 64 FR 34726, 34729.

meets the general SIP requirements of CAA section 110(a) and whether that rule represents, pursuant to CAA section 189(a)(1)(C) a “reasonably available” level of control and is scheduled to be implemented as expeditiously as practicable. EPA will consider the quantification of the emission reductions from the general permit rule in its forthcoming actions on the State’s reasonable further progress and attainment demonstrations in its serious area plan submittals.

**Comment:** ACLPI comments that the State has proposed to revise the SIP to include the general permit rule as both a control and a contingency measure. Citing CAA section 172(c)(9) and a proposed EPA action on a Washington SIP, ACLPI states that it makes no sense to denominate the rule as a contingency measure.

**Response:** This comment is also beyond the scope of today’s rulemaking because EPA is not acting on the general permit rule as meeting the Act’s contingency measure requirements. EPA will address this issue in its forthcoming actions on the State’s serious area PM-10 plan for the Phoenix area.

#### **IV. Additional Supporting Information**

The majority of information used by EPA in support of this action is found in the FR and CFR citations referenced in the NPR, supporting TSD, and in State’s SIP June 13, 2001 submittal.

If the reader would like copies of any of the documents mentioned in the NPR or this TSD, please contact John Ungvarsky at 415-744-1286 or [ungvarsky.john@epa.gov](mailto:ungvarsky.john@epa.gov).

Attachments

## **List of Attachments**

To obtain copies of the following attachments, contact John Ungvarsky at 415-744-1286 or at [ungvarsky.john@epa.gov](mailto:ungvarsky.john@epa.gov).

1. Technical Support Document for Approval and Promulgation of Implementation Plans; Arizona -- Maricopa Nonattainment Area; PM-10. Notice of Proposed Rulemaking. June 22, 2001. (<http://www.epa.gov/region09/air/phoenixpm/tsd.pdf>)
2. Letter from Joy E. Herr-Cardillo of the Arizona Center for Law in the Public Interest to John Ungvarsky of EPA dated July 30, 2001.
3. Letter from Dan Thelander, Chairman of the Governor's Agricultural Best Management Practices Committee to John Ungvarsky of EPA dated July 30, 2001.